

RRR000688

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Appleton, WI 54915

Public comment by Tawn Shillinglaw on the Draft Supplemental Environmental Impact Statement for a geologic repository for the disposal of spent fuel and high level radioactive waste at Yucca Mt., Nye County, Nevada (DOE/EIS-0250F-SID Oct.07)

- 1 [My reference pages here are to the Summary booklet —  
Page S-51/52ii: You refer to the Nevada Rail Corridor EIS, and the Rail Alignment EIS as an update to that. By law, aren't you to consider a "reasonable" alternative? You say the Tribe would not allow nuclear waste to be transported across the Reservation and it "has withdrawn its support for the EIS process." Therefore, the Mina alternative is not "reasonable" at all or even an alternative.] [You need to consider a "reasonable" actual alternative from the south between Las Vegas and CA where the weather would be better. Look at other alternatives that are possible — evaluating one that isn't possible doesn't fulfill the requirements of the law.] 2
- 3 [Page S-7 You say "Yucca Mt region is one of the driest in the U.S." This shows how important water is to Nevada and water use will be a big problem as you will find need for more and more of it over the future — as will Nevada.]
- 4 [p S-8 NWPA limit is 70,000 MTHM and nothing beyond that limit should even be referenced, much less evaluated, in this document. (It should all be removed.) I would think it would be against the law to put it in here.]
- 5 [p S-8 You refer to "dual purpose (storage and transportation) canisters several times in this document — especially p5-14 and 5-16 — You say dual-purpose canisters would be placed in "aging" overpacks for "aging" on the "aging"

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gads." By definition it is clear that "aging" is "Storage" and against the law at Green Mt. You cannot use any dual-purpose canisters there. These canisters are licensed by NRC for Storage. It is clear in the documents.

If you mean what you say, then only TADs canisters would be allowed—as I stated for aging in TAD, and if that is licensed by NRC for "aging", then that is all you can use—an aging canister, not a "storage" canister. You can't have it both ways and avoid fooling anybody with this misuse of terms. But if you want to get away with "aging", then follow the law, and do not use "Storage" licensed canisters there.

\* \* \* { Any dual-purpose canister from utility must be opened at the utility and put in a TAD canister, or opened open arrival at Nevada and put in a TAD container right away before going to a pad there. It is very clear to me that about ground storage never has been allowed at a repository in the documents. It may stay there forever if there are reposition problems. The law was made to prevent that from happening.

"Aging" is a weasel-word and you fool nobody. Any cask should be licensed by NRC under the rules of the Code of Fed. Regulation in licensing costs—not as part of the repository license. A cask is a cask! It should be NRC licensed as the actual type of cask it is under the certification process NRC has developed.

Also, "aging" time limit needs to be clear.

I would think a quick turn-around from pad to the drift should be in a year at the most.

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My concern here is for the deterioration of the spent fuel assemblies (cladding, support structures, pellets etc.) "Oldest fuel first" was the plan years ago and a good one.

Nobody really knows what has been happening in all those dry casks at our pad in Wisconsin at St. Beach. Has everything become brittle in the drying out process over the years of hot summers & very cold winters here? Has the ~~oxid~~ flaked off and revealed blister holes and hairline cracks? Nobody knows what will happen to all these materials as they bump and jolt across the country on rails and highways in those old dried out assemblies that used to sit quietly in utility pools - wet forever. You have got to do some long-term ~~tests~~ <sup>testing</sup> in actually opening these casks from utility pads, putting them in TAD containers, haul them to Nevada, and open them upon arrival, so we of the public really know that those assemblies are actually still intact before they go into the drifts. This cannot remain an unknown, and it is a big one that has concerned me for years.

"Oldest fuel first" is also the only way the public is protected the most while the waste is in transport. There is no reason I can think of to expose people (and workers at the plants) (as well as train and truck drivers) to any higher doses than absolutely necessary. Isn't that in NRC regulations? The oldest fuel is least radioactive, and also liable to deteriorate more if left at utilities. The casks already loaded at plants must go to Nevada 1st. The utility pads must be empty before any fresh spent fuel is in transport. You can't endanger the public any more than absolutely necessary because the utilities may want to exchange places in line for fuel removal or want to empty their

pools. "Oldest fuel 1st" <sup>(4)</sup> should be followed. If not, I want to know why not and think it is unlawful.

Also you need to consider the use of water to decontaminate transport casks. I assume you are reusing them, and, once unloaded, they will go back across the country. How many times can one be used? Will the interior be decontaminated at Yucca each time before going back to the utilities? The EPA is hauling PCB's out of the Fox River in my backyard, and the trucks have to be washed down before every return from where they are dumping the PCB's. Should be the same for transport casks — that's a lot of water use. How much? Has "weeping" been considered carefully? This needs testing — with real casks and real spent fuel. Will the casks "weep"?]

b Also, [how much fossil fuel will be burned and how much pollution contributing to global warming will be created by all this transport over the years? I want an answer to this question. It is very important. This needs to be evaluated as far as monetary costs as well as human health costs. (Dilution is not the solution — just because it's spread all over the country, still makes it a big amount in total contribution to the problem.)]

7 [ps-9 This diagram (Fig 5-4) is only an artist's concept. As far as I know, a TAD has not even been designed yet much less have tested.  
A. Is the weld on the bottom plate going to be inside the cylinder at all? Will it sit inside it, or will it be welded to the bottom edge of the cylinder — overlapping the end? This may be important as to where the weld seam is and ground down. Is the shield plug to fit or will the NRC allow shims to be used as in the VSC-24? They were a real problem if you

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needed to open the canisters. All lids should fit all canisters and be interchangeable — this is a quality assured issue that needs attention. If not, it causes problems. Are there holes in the lids and cylinder for vacuum drying, etc.? How will all openings be welded shut and how will these welds be tested? Welds will be the "Achilles heel" in the repository. (I think the seam cylinder weld should be on the bottom when the canister is placed on the pallet so that condensed water will not be allowed to sit in that seam if it is inverted over time. The corners of the internal basket need attention — in the VSC-24 they were a problem — they need to be strong and not bend or crush at the ends so that fuel can get in and out easily.) [What is the plan for retrieval? (For opening a canister in an emergency) I want to know this.

In our VSC-24 it was one flimsy paragraph saying — removal was the reverse of loading — which surely was not the case when they found a problem cask and actually considered a real unloading — that cask still sits at Palisades never unloaded but closely monitored, as far as I know.]

9 [Will a full size TAD and overpack for storage, transport, and disposal, be built, filled with real spent fuel, and time tested in transport and storage? Certainly public safety demands this of the NRC to evaluate. And certainly no pads can be built until the TAD is fully licensed. These "hold down fasteners" of cask to pad I've seen in drawings are something new — never seen that in any design before. Are these for earthquake protection? Why? How tested?]

10 Also [The diagram doesn't say, but I understand only 21 assemblies are to fit. So where do the extra 3 assemblies from a VSC-24 cask at our Pt. Beach

8

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utility go then? Back into the pool after years on the pad drying out? If so - how has spent fuel been evaluated for the wet-dry-wet-dry changes over the years - wet in pool - dry in cost - back to wet in pool - dry in coming out again for transport to Nevada? Will crud that is brittle and dry come off in the pool and cause visibility problems (as it did with the coating coming off VSC-24s at Trojan?) you have to test all these details in the real thing or you will end up with a disaster some day (as we did with the explosion at H. Beach from unexpected hydrogenation from the painted coating on our casings.)]

- 11 [p5-10 What tests will be done on TADs when they arrive in Nevada to prove that what the utility says they put in them is actually what is in them. Certainly random opening of a TAD, at the least, should be NRC required over the years, so that utilities are truthful. Will this be done? We need to know the condition of at least some of the assemblies after transport in TADs. You can't depend on what you put in a computer model as proof. We need to evaluate the real thing and certainly NRC should require this too.]

- 12 [Fifty years of active ventilation really worries me. Those exhaust ventilation stacks on the crest of the Mt. Could be sabotaged - hit by a plane or plugged by an explosion from a terrorist - what risks have been evaluated? What is the actual emerging plan? This needs to be done before any of this is built. The public needs to know you have a real plan to put right into action if there is any expected or

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unexpected emergency. We had an explosion in loading a cask in Wisconsin and nobody knew why or what to do about the problem at 1st — a real unloading plan wasn't even designed yet.]

13

[Then you say here that the Titanium drip shield won't be put on for 105 yrs. from emplacement of the waste. I find that deplorable and doubt that they will ever be put in there after rockfalls, deteriorating tracks, etc. etc. And Fig 5-8 on p5-18 shows the invert to be of carbon steel. Carbon rusts — no carbon should be allowed in the repository. What holds up the tunnel rock? Who it "shotcrete" or something like that? What is that made of? The rails? What else is in there? If the tunnel falls apart — alloy 22 and titanium won't help. If that passive layer on alloy 22 is scratched, and if the drip shield is dented to catch water instead of repel it = Then goes the whole ball game!]

14

[What is your plan if the placement of fans doesn't work over time? Mechanical failure of ventilation system? Sabotage of this? (All of us have seen enough spy movies to know there will be a way for a terrorist or even a disgruntled worker or one on drugs, to write or work their way into the system to do harm. What is your emergency plan?)]

15

[p5-12 Will "aging" overpads be reused? If so, how decontaminated and inspected? How much water needed? If faulty — where will all these transport and "aging" overpads be repaired? Where will they be disposed? Has this all been evaluated as to expenses, costs, and materials or dump sites of low level waste needed? Need to be done.]

- 16 [ps-14] I repeat — you cannot store a dual purpose canister at Yucca Mt. They are licensed for storage. And physically how would this work anyway if you want to reuse the "aging" overpacks. The dual purpose canister would be too big and hold more assemblies than TADs — where would you put the extra assemblies when unloading a dual purpose canister to put 21 into a TAD? How much pool space will there be? I think this will have to be done at utilities and only TAD's allowed in Nevada. The utilities who paid for dual purpose canisters will be stuck with the low level waste of these canisters and overpacks at their sites. Where will all these cardboard casks go in each state?]
- 17 [ps-15] The space between the cask bottoms + tops bothers me in this Fig 5-9. How far is it? How hot is it in this space between ends? I know the shield plug is there, but is that enough, (with the endplate of the other cask) next to it to prevent overheating or high radiation levels in this close space?
- 18 [ps-16] \* What space here between ends does your "Emergency plan" require to get a problem cask out of there? A retrieval plan is an NRC requirement and needs to be on paper — in detail and NRC accepted. An "artist's concept" isn't very good at this point — we need a diagram of the real thing — which I assume is unknown currently.
- 19 [ps-16] Under definitions here, you say "TAD Canisters and dual-purpose canisters would be placed in aging overpacks for aging on the aging pads." Dual purpose canisters, I repeat, are NRC licensed for storage — not aging. You can't use storage canisters at Yucca Mt.

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20 [P 5-17]

Have there been tests of the new thing giving actual proof (not computer models) that the mid-plane region will remain below the boiling pt. of water and that this will cause condensation of the steam at that location? A lot depends on this theory to keep liquid away from the waste packages. The public needs to know this is properly understood NRC

[continued.]

21

[You talk about receiving waste packages "too themselves, not for employment at the time it was received." If you allow this, then the public along the transport route, as well as workers at plants and drivers etc., are all being put in unnecessary danger. Spend just 100 feet for the repository, store it NOT be on our public roads and highways at all.

\* Thus — they are much more susceptible to terrorist "hostage" holding in a severe strike, or to terrorism in sabotage. Oldest fuel should go 1st and into the tunnels as soon as possible. Don't you think there is a lot spent fuel safely across our country? Or not?

22 [P 5-17]

Your mention large transport vans. With both our Kaukauna and St. Louis plants on Lake Michigan, I fear this. People around Wisconsin will certainly object. The lake is a big risk not necessary.

This Fig 5-8 is only an artist concept. When will this be finally designed? It should have been done now — before you submit this SEIS at all. The NUREG has always appeared to feel that the repository shouldn't be so hot — there is a lot of technical expertise on that board and I think they are right. You design says "this area would expand and contract as the temperature rose and fell over time." This is a very

wrong side fast and I want to know how all material  
interactions will respond? Has this been NRC evaluated?  
Materials interactions can even create new material and  
movement of anything in those drifts affects every thing  
else. It has to be treated as a whole interacting system.  
One cold failure or rock bolt failure or rail off  
alignment from a loose bolt, or what ever, can affect  
everything — [remember the house that Jack built?])]

24 [PS-20] This "Shared use option" should not be allowed. Terrorists  
could use another freight (natural gas etc.) as a trigger for  
an explosion in this heavily traveled route at the end of  
the transport. It should be designated trains as well as  
designated rail here. Sabotage would be too easy.]

25 and [frankly the damage from all this overweight trucking  
shouldn't be allowed either — who will pay for repair  
of these roads? Taxpayers — certainly not the nuclear  
industry. One more hidden cost over the years.]

26 [PS-20] I find this statement ominous as to utility agreements  
— false assumptions of DOE and lawsuits going on — you say  
on the page "the FEIS assumed that the reactor sites that did not  
currently have the ability to load large rail cars would  
modify their facilities to obtain the ability. This SEIS does  
not make that assumption". So why was it put in the FEIS  
in the 1st place? This just goes to show that you are not  
ready for license supplemental to NRC at all yet. This rush  
to get it in is only going to delay things really, because  
you need to get it right the 1st time and such an  
assumption about the utilities is a big mistake!]

27 [PS-21] for this SEIS to analyze health effects even for 10,000 years  
much less a million, I think is ridiculous. Nobody can predict  
that far out — and interactions of health problems at that time

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Can only be "fortune telling". Global Warming will have a big effect as climate often affects disease and if immune systems are low — any health effect can be more than expected. The earth is whole (and soon) — the exception of Mt. St. Helens left such falling on our lakes in WA.

So Yucca Mtn. will affect this country and beyond. Some just setting an example for other countries to go ahead creating more radioactive waste and building more

nuclear plants will offset our future for some.]

28

[p 5-23 "Doe is currently very aged in distinction with the state of

Meadow with regards to their winter nights" — a big problem!]

29 [p 5-29

You say the safety analysis provides "an inherently safe facility that meets the resilience performance by actions"

How can that be when you don't have a AD design, a red design, soils tested for the pad, long term testing of actual spent fuel in a real waste package, — or even an emergency plan?

30 [p 5-30

"Throughout the project, workers and the public could be exposed to naturally occurring radioactive — included as dust." This needs more study for the long term, especially if there are rockfalls etc. as time goes on. What goes out of these ventilation stacks? What comes in?

How do you know? How will Hanford affect the passive layer or all day? (This dust from everything is a big concern to me when you predict this passive layer really working!)

31 [p 5-31

"Accidents and Sabotage Events" — I don't know what you concentrate on airplane crashes. I doubt that would be fixed again. I would think sabotaging the trains would be easier. We have all seen enough war movies about such stuff — people can be killed, spies can get in as bombers,

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Throughout history, it has been done. There is no foolproof solution — (If you build a repository — "they" will probably come — it's such a huge target.) I think it's dangerous to put that much radioactive waste above ground and below ground in one site. Never was the plan in all the historical documents about an MRS, a secondary third repository, etc., etc. And now that terrorism is really a concern in this country, is no time to do what all those previous analyses said not to do. ]

32 [ PS-32 If the maximum accident would be "breach of a dual purpose container with 36 PWR, then these should not be allowed.]

33 [ PS-32 You refer to NRC reg. 10CFR 63.21 and 73.51 about "STORAGE" of spent nuclear fuel. I don't see any such regulations about "AGING" — where are these regulations for "AGING"? You can't do "STORAGE" at Yucca Mt.]

34 [ PS-33 Looks like you think the biggest danger would be from fire. How has flammability of materials been checked for all the repository structures and what they will hold? Will there be fire barriers at all, to stop one if raging through the facility? What is the emergency fire plan? You say water is a problem — what will be used to put one out? Where is the nearest fire dept.?]

35 [ PS-33 Ventilation fans, diesel generators, cooling towers, and air conditioners can all be sabotaged — what are the risks here? How are events modeled? How remedied if they occur? What are the possible ramifications? Don't send a license proposal in to the NRC until they can evaluate how you will be ready for handling events you don't expect. (If it can happen, it probably will eventually.) ]

- 36 [p 5-34] These exhaust stacks bother me. How will the exhaust be tested before release to the atmosphere? What is in this exhaust? The public need to know this! It needs monitoring and public notification.]
- 37 [p 5-37] I really don't trust this modeling — computers only spit out what you put in, and I think that the NRC is no longer thinking creatively as to the ramifications of the unexpected. That's what happened at St. Bechtel in W. Va., so don't expect me to not expect an unknown. Neither the vendor, the utility, or NRC tested the materials for our VSC-24 cash and did not know what caused the explosion here. There was a pressure build-up in testing a small proto-type that I always felt could have been the hydrogen production nobody looked carefully at. Luckily nobody was killed when that lid (weighing tons) lifted up from the explosion in loading a cash.]
- 38 [p 5-37] You say that there is an increase in thickness of the alloy 22 outer barrier to accomodate the TAD canister?" \* What will this increase cost? Will the alloy 22 be available in such quantities on time? How will vendors and sub contractors be checked for Quality assurance? That the correct thickness was used? This was a big issue with numerous problems and hold ups in our cash development. If the TAD's aren't built to specifis — the whole reporting may have to be unloaded in the future. That's why constantly amending and changing the design of a cash leads to trouble. Get it right the 1st time, before you build them. Test full scale cashs — the real thing. If you have 2 vendors doing the

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production, how will they interact to create the same product? I'm not sure using 2 or more vendors is the right thing to do. Competition sometimes breeds fraud to "out do" each other. We don't want a cheaper, poorly built cask, just so some vendor gets the contract. QA is of the utmost importance.

NRC needs to check a vendor's history carefully.]

39 [p 5-38] "Expert opinion" and "assumptions" and "uncertainties" for such a complex system can have grave consequences. You reference "continued testing and monitoring" but you haven't even tested a TAD yet — So I'm concerned that this is all going way too fast to get construction authorization way before you are ready.]

40 [p 5-43] I'm very interested in this International Working Group on Sabotage. I do hope this interaction will help, and am glad it is being done. This is a worldwide problem now.]

41 [p 5-43] When you say here that the "cladding" is protection in storage and shipping, I think that needs evaluation. How has cladding (the real thing) been checked from spent fuel taken out of a storage cask after being out on a rail in Wisconsin weather all those years? If you don't check the real thing, you don't know. The CR4D could have fallen to the bottom of the inner canister — blisters could have dried up and flaked off leaving holes, hairline cracks could dry and widen, pellets could be dust in there — drying out spent fuel over years of high + low <sup>①</sup> temperature changes and high radiation may lead to surprises when you check that stored spent fuel. Maybe it won't even be intact enough to reload in a TAD, or go bouncing along our rails and highways. We need to know.]

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- 42 [p 5-43 When groups brought up terrorism and sabotage concerns way back at our W.L. cash hearing - nobody paid attention. They told us this would only happen in big urban areas - not here in WI. Military people testified about how easy it was to order weapons - even from catalogues in the library - surely intent was increased tremendously since our hearing long ago) has enhanced that availability. Modern weapons will increase in destructability as the repository plans develop into reality. Is it really going to be safe? Could a terrorist easily mess up a trainload of cashes?]
- 43 [p 5-44 "The potential private fuel storage facility in W.L." is referenced. Why isn't that "aging"? It should not be allowed. It's an MRS, and a TAD is just the old MPC. History repeats itself. People forget.]
- 44 [p 5-45 I really challenge the no action scenarios on this page. When utilities were promoting cash and pads at their plants - everything was "safe" - now you tell us if the cashes aren't removed it will have "catastrophic consequences for human health." This sure is a turn around. We've told problem cashes could be unloaded and replaced. I see no reason facilities can't take care of this waste on-site - forever monitoring it and replacing cashes - the fuel is "aging" on our pads and will become less and less radioactive. Moving it across the country concerns me more than leaving it there really. The big concern is releasing the plants to create MORE spent fuel. This is a slap in the face to all of us trying to safely solve the problem of radioactive waste all these years.

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We aren't trying to find a safe solution to just  
mistakes of creating this horrid stuff on earth —  
just to give the green light to create more  
nuclear waste to eventually put in a 2nd or 3rd  
repository maybe in Wisconsin [we are on the hit list.]

45 [p 5-46] you talk about "unchecked deterioration and  
dissolution of materials" and of "increasing  
uncertainty" — Well those fit Yucca Mt. very  
well in the future as well — and that contains  
waste hidden from sight, underground, and we  
can't remedy problems easily. At least, above  
ground, we can constantly monitor the situation  
in tanks and replace them or use new technical  
developments — we can get at the stuff!]

46 [p 5-46] I strongly object to tax payer money being used  
to pay DOE to work with the Global Nuclear Energy  
Partnership which would, as it says on the page, "encourage  
the expansion of domestic and international nuclear energy  
production." (and nuclear waste nobody knows what to  
do with safely!) Why would we want to do that?

isn't DOE partnering with wind and solar and  
geothermal, etc. energy programs? Where are these  
impact statements? And to even consider "recycling"  
spent fuel, as you do here, does not belong in this  
document. It is not and should not be a consideration —  
nuclear proliferation is a big concern worldwide.

[If the US does something, other countries want to also.]

47 [p 5-47] This Inventory Module 1 and 2 should be taken  
out of here. They are against the law. It is not for  
DOE to promote nuclear energy and that's what this is.]

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48 [PS-50] "DOE would use fossil fuel from the nationwide supply system to transport spent nuclear fuel - " How much fossil fuel use is the prediction for each year till the end of transport? What are cost predictions? What are pollution predictions from rail and truck use as well as the repository itself? The public needs to know the amount of pollution, its costs, and the relationship to global warming in the future.]

49 [I am a grand mother and I am deeply concerned about my 3 grandchildren's lives in the future (and their children too). Transport of nuclear waste is really a big issue - I don't see it as necessary at all and I don't see creation of more radioactive waste as necessary at all. You'd think the lessons learned throughout the history of the huge problems of nuclear waste since the 1st creation would teach humans something. Yet Hanford, Fernald, 3 miles Island etc. etc. etc. seem to have been forgotten. Some of that waste buried isn't even in a known site, and some (in those huge liquid tanks of waste) is an unknown mess in those containers. It has been a real mess over the years. Yucca Mt. was not meant to create more nuclear expansion - it was meant to "solve" the waste problem we already have and that's all.] [And considering its "possibly post-closure impacts to the health and safety of future generations", it can't even do that successfully.] 50

51 [PS-56 you forecast "increased domestic production of titanium in the future", so you say, and needed 22% of US imports in 2006. The drip shields in 105 yr. will notably

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never be put in. I doubt there will be titanium to do the job. Please consider this.]

52 [PS-57]

Air Quality — You talk here of 20-35% of the county-wide burden caused by rail transport — This is a lot! What are predictions long term?]

53 [PS-61]

You say "Most water would be supplied by new wells" How would you know that there will work? ] (Nebraska)

54 [PS-61]

Fossil Fuels — 6.5% statewide used during construction, and what is the pollution from this? — a lot. ] (Nebraska)

55 [PS-63]

Scenario 2 is a real "scare tactic" completely the reverse of how safe we were told. These dry cash storage facilities would be when the utilities wanted to build them. Now they are going to cause "large atmospheric releases", "radiological contamination of groundwater" and "land contamination" etc. ]

56 [PS-64  
PS-66]

"hazardous exposures to the public" and even "disproportionately high adverse impacts to minority or low-income populations". All of a sudden dry cash storage at the plants is a potential catastrophe mess! Just because you want your "no action" scenario to promote creating a repository. We never would have allowed dry-cash storage in Wis. if the end result would be all that awful. We always expected it would stay here, and it probably will. We won't move westward. ]

57 [PS-67]

To say that "rail line construction emissions would be distributed the length of the rail" doesn't make the emissions any less. "Dilution is not a solution." Just because it doesn't exceed a local limit doesn't tell us how the total amount will affect our total air quality. ]

58 [p 5-68] Groundwater — demands will be a real problem;  
a full long term evaluation is needed here.]

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59 [p 5-73] you say "growth in water demand in Nevada has been very rapid" and it will be an "overarching controversial issue". yes, and all over the world with climate change in global warming affecting this too. So counting on a water supply for decontamination, for schools, for dust control, for construction, for workers use, for fire control, for emergency problems — terrorism, sabotage etc. — will be a problem — a big one. This needs careful NRC creative thinking far into the future. Will water really be the crux of the problem? You can't just put the whole system on hold because of lack of water each time you need to dig a new well and it fails. Water needs a lot more evaluation long term in this document and in any licensing proposal for construction.]

Thank you for consideration of my public comments. I hope to receive answers to my questions.

Fawn Shillinglaw

Jan 6, 2008  
1952 Palisades Dr.

\* Additional 40 Jan 4, 2008 comments already sent:  
Public Comment by Tom Shilling law on DOE/EIS -0250F-SID  
on SEIS for a geologic repository for the disposal of SNF and HL  
radioactive waste at Yucca Mt., Nevada Oct 2007

60 [as I said Jan 4, dual-purpose canisters for storage and transport  
should not be allowed on aging pads. After reading more detail  
about the use of horizontal and vertical dual-purpose canisters  
on the Yucca Mt. pad, I am even more concerned. It sounds like  
the horizontal Nuklears system transfer vehicle to push the  
canisters when overpack horizontally. So will your pads be  
evaluated for TADS in aging overpacks, as well as, all the different  
horizontal and vertical storage canisters and overpacks? How about  
seismic consideration on those "hold fast tie downs" (or whatever)  
to keep cans from going over? Those pads (and anything attached  
to them) need very careful NRC evaluation, \*soil testing before  
being built, and monitoring systems. Dual purpose (horizontal  
and vertical) containers will cause complications. Canisters can get  
jammed in those transfer vehicles. Also, aren't inner bushings  
designed for horizontal storage only in some of these designs?  
Look at reality here. The idea was to use TADS only to simplify  
things at Nevada. You will now have all kinds of unloading and  
transfer situations, as well as extra assemblies to store in good  
rocks. All fuel should be loaded in TADS only at utilities.  
Don't accept dual-purpose canisters. (They will cause problems)]

61 [Also (p 2-23) you say those carbon-steel frictional  
rock bolts put in initially in the tunnels "would remain in place".  
Nothing with carbon in it should be in there — it will rust, fall  
out, cause problems (leakage, rockfall ??). Look at this carefully.]

(2)

62 [p2-29 I am very glad to see the removal of the titanium sides — it was a bad one — lifting by the pallet sounds better. Also the modification of the gap between inner and outer vessels for thermal expansion — I know some of the earlier cash designs were too tight at 1st. I can't see, however, how you can place cashes only 4in. apart in the drift — too limited access for any problem and retrieval. It looks pretty obvious that you do not have a final cash design, insert, or pallette — or even the transport enforcement vehicle. Believe me — when that transporter 1st was used (on a dry run) at Ft. Black — it couldn't make the turns — they had to pull sand on the road — make sure you test all this properly — it is a 1st of its kind — do lots of dry runs — that alloy 22 passive layer cannot be scratched or full of dust in transport.]

63 [I think the crushed stuff under the insert sounds good — if it doesn't shift easily, and allow the pallet to tilt, and let the cash roll off on its side. Can this happen? How stable will this pallet be? How tested?]

64 [I didn't know alloy 22 and titanium couldn't be welded — is that really workable to "mechanically" attach second plate of the dry shield? That could be a "soft spot" in the system causing problems. Maybe more creative thinking is needed here. I still think carbon steel should be in the insert, especially when you say it can cause "hydrogen embrittlement of titanium". Will alloy 22 do the job necessary to separate them? Materials interactions should be carefully considered — over time, a long time. It's crucial.]

65 [p2-34 I don't think nonpotable water should be used for decontamination, what could be in this water? Ramifications?]

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- 66 [P. 2-35 What is "blowdown from a cooling tower"? Is it contaminated.]
- 67 [P. 3-8 It seems strange to me that President Bush wants to give the Western Shoshone Tribe \$145 million, when apparently the tribe has refused money since 1872 and maintains the Ruby Valley Treaty of 1863 gave them a right to the land. If the courts say the land truly is not the tribes, why are you trying to pay them off? As we all are finding out, the history of environmental racism toward native americans is terrible - especially in the area of radioactive waste (yellowcake etc.) Seems to me the US government has not "met any obligations" here in taking the "aboriginal title" to the land. This seems wrong.]
- 68 [P. 3-23 You still have unanswered questions about the "high crustal strain rates" (not expected) and their cause. A model for seismic activity cannot be relied on when actual events already show it is wrong. When you have waste casks "resting" on pallets and can roll off, or dry shield can come apart etc. - you can't afford to enter into a licensing proposal with NRC until you understand seismic activity and these crustal strain rates. It's ominous.]
- 69 \* [Alloy 22 worries me more and more. Have you tested it for long term high radiation effects along with heat? Looking at the real handling details, it is too much to expect that the passive layer won't be harmed in handling (lid on, fuel in, transport, transfer, placement etc. etc.) Plus the welds on it are not alloy 22 and will be soft spots that will corrode. Upgrading the basket inside also needs evaluation in detail - what happens in there - really? Test this. The "devil is in the details" and you must realize the details of the cask are top priority. What you design on paper will be very different from reality in actual use. The bottom plate thickness is that 4 in space between placement of

(4)

Containers in the drifts may not be enough - can water condense between the top + bottom plates of the 2 cards only 4 in. apart? That is very close placement in the drifts.]

- 70 [p 3-77 Vibration: "Construction, transportation, military activities" - ★★★ this needs real evaluation, you are putting a railroad in there and you just have a "separation" between construction tunnels and waste emplacement. So those disposed containers may not be sitting quietly on their pallets as everybody infers. You have vibration from construction in the tunnel next door, trains and heavy-haul trucks above, and the emplacement vehicle coming down the trash into the drift - what else? The real vibration amount, in real use over time, may be a surprise causing rockfall and cracks. This really is a new concern and a big one. Look into this please.]

- 71 [p 3-82 If fossil fuel system is "marginally reliable" because of the "isolation" then isn't this a cause for concern? Nevada needs it too. How much will the repository need over time?]

- 72 [p 3-91 (P.S. I still now put all heavy load is heavy load is much heavier for most the migrants - will even go with K-10 on highway) <sup>overweight</sup> Heavy-haul trucks - La Crosse (Genon), on the Mississippi in WI, will use these, and I think our Keweenaw and Pt. Beach plants need it to rail heads also. I use roads near these places, as they are all on scenic routes on the rivers and on Lake Michigan - (full of tourists) - I don't want to be driving behind radioactive waste. The La Crosse route has to go on the road that is just between high bluffs and the river. What a target from a bluff top! Not good.]

- 73 [p 4-85 Carbon steel in the vent ducts? This will rust. Can you afford to have these vents not away? Evaluate this please.]

- 74 [p 4-111 Retrieval is probably not just "the reverse" of emplacement anymore ★ Then unloading our VSC-24 cask was "the reverse" of loading. Don't let surprises happen when this has to be done - as the explosion in WI! This needs evaluation - in detail.]

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75 [A-2 and 3 looks like the nuclear industry said a flat "no" to 90% of TAD canisters, and it will be 75% with a lot of dual-purpose canisters. DOE may need a second Wet Handling Facility to deal with this mess. Dual-purpose canisters with already stored waste in them need to be opened at commercial utilities who know the real state of the spent fuel in those never tested in reality casks? They all are of different types and sizes etc. - never used before with real spent fuel — They are the "guinea pigs" of dry cask storage. Why should the public accept them in public transport venues? Use TADs only and standardize and integrate the total system for the safest plan for the public. NRC should demand this.]

76 [B-24] DUST has always been a big concern for Alloy 22 passive layer. How will putting backfill around the enclosed casks be affected? DUST needs more study for every aspect inside the loaded tunnels. The use of the rail system and transport and containment vehicle is still a mystery to me — and I think to you too. It must be designed in detail and NRC evaluated before any licensing. If backfill dust covers the passive layer, then what?

77 [G-50-51] Baltimore Fire in Tunnel — Your evaluation using these old transport cask models does not evaluate a TAD. The led vent and drain ports will be crucial openings if sealed, and you don't know the condition of cladding and crud on those assemblies. Your evaluation is based on assumptions and beliefs of vendors. Needs more study. Transport accident and sabotage events with multiple weapons need a lot more NRC creativity here. Public safety should be of main importance. My grand children may be traveling behind a <sup>overweight</sup> ~~overweight~~ truck of waste frequently. I am concerned.]

Thank you,  
Tawn Shillinglaw